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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/523,332	03/10/2000	Akihiko Mochida	P/16-259	5458

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EXAMINER	
WONG, ALLEN C	
ART UNIT	**PAPER NUMBER**
2613	

DATE MAILED: 08/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/523,332	MOCHIDA ET AL.	
	Examiner	Art Unit	
	Allen Wong	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 March 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 3/31/05 have been fully read and considered but they are not persuasive.

Regarding lines 9-15 on page 12 of applicant's remarks, applicant reiterates that neither Kaiya nor Chikama disclose or suggest the previously claimed features of "timing signal generator circuit..." and "phase adjustment circuit...", as discussed in previous communications. The examiner respectfully disagrees. The examiner emphatically reiterates that the limitations, "timing signal generator circuit..." and "phase adjustment circuit...", are disclosed as discussed in previous Office Actions and in the rejection below.

Regarding lines 16-22 on page 12 of applicant's remarks, applicant asserts that Matumoto does not disclose the use of a phase-variable sampling pulse generator for adjusting the phases of the timing signal, so that signal relays can be compensated over a transmission line, in that the timing signals do not vary for driving the imaging apparatus. The examiner respectfully disagrees. Kaiya's fig.1 discloses that element 33a is a phase adjustment circuit that is used to vary timing signals for driving the imaging device in imaging apparatus 4a. Also see col.6, ln.38-52. Kaiya and Chikama are silent about "the compensation of the signal delay occurring over a signal transmission line." However, Matumoto teaches the use of a phase-variable sampling pulse generator for adjusting the phases of the timing signals so that signal delays can be compensated over a transmission line. In figs.1 and 3, Matumoto suggests the

disclosure of element 19, the phase-variable sampling pulse generator, in that the horizontal drive pulse, Φ H, or the reset pulse, Φ R, signals are inputted into element 31 of the phase-variable sampling pulse generator for processing the pulse width, then into element 32 for phase adjustment to be done over a transmission line. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Kaiya, Chikama and Matumoto, as a whole, for effectively operating a correlated double sampling circuit or the like without changing the operation timing when it is used for electronic endoscopes having different lengths and minimizing circuitry requirements for saving costs, as disclosed in Matumoto's col.2, ln.39-47.

Regarding the bottom of page 12 to the top of page 13 of applicant's arguments, applicant argues that there is no motivation to combine the teachings. The examiner respectfully disagrees. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been obvious to one of ordinary skill in the art to combine the teachings of Kaiya, Chikama and Matumoto, as a whole, for effectively operating a correlated double sampling circuit or the like without changing the operation timing when it is used for

electronic endoscopes having different lengths and minimizing circuitry requirements for saving costs, as disclosed in Matumoto's col.2, ln.39-47.

Regarding lines 10-15 on page 13 of applicant's remarks, applicant mentions that the double patenting rejection of claim1 is traversed. The examiner respectfully disagrees. The obviousness-type double patenting rejection is considered to be valid because of the discussion and reasoning as indicated in the above paragraphs and in the below rejection.

Thus, the rejection is maintained.

Claim Rejections – 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaiya (5,178,130), Chikama (4,710,807) in view of Matumoto (5,434,615).

Regarding claim 1, Kaiya discloses an endoscopic imaging system comprising:

an endoscope having an insertion unit which is insertable into an object, the elongated insertion unit having an illumination optical system for illuminating an object and an objective optical system for forming an optical image of the illuminated object (fig.1, element 2a);

an imaging apparatus having an imaging device for picking up the optical image and outputting a signal (fig.1, element 4a);

a video processing unit to which the imaging apparatus is detachably connected and which processes the signal to produce a standard video signal (fig.1, element 32a);

a display for displaying images of the object according to the standard video signal (fig.1, element 5a);

a timing signal generation circuit, incorporated in the imaging apparatus, for generating timing signals used to drive the imaging device (fig.4, element 33a is the same synchronization circuit as element 33a in fig.1, where element 78 is the timing signal generation circuit); and

a phase adjustment circuit for adjusting the phases of the timing signals so as to compensate a signal delay occurring over a signal to said imaging device which is linked and over which a signal is transmitted (fig.1, element 33a is a phase adjustment circuit; also see col.6, ln.38-52).

Kaiya does not specifically disclose "permitting an operator to manually adjust the phases...." However, Chikama teaches that the phases can be manually adjusted by an operator via a dial or the like (col.7, ln.38-40). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Kaiya and Chikama for clearly viewing crisp, sharp images so as to accurately ascertain the scene or subject being viewed (Chikama col.2, ln.26-30).

Kaiya and Chikama do not specifically disclose the compensation of the signal delay occurring over a signal transmission line. However, Matumoto teaches the use of a phase-variable sampling pulse generator for adjusting the phases of the timing signals so that signal delays can be compensated over a transmission line (see fig.1 and 3,

note the disclosure of element 19, the phase-variable sampling pulse generator, in that the horizontal drive pulse, Φ H, or the reset pulse, Φ R, signals are inputted into element 31 of the phase-variable sampling pulse generator for processing the pulse width, then into element 32 for phase adjustment to be done over a transmission line). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Kaiya, Chikama and Matumoto, as a whole, for effectively operating a correlated double sampling circuit or the like without changing the operation timing when it is used for electronic endoscopes having different lengths and minimizing circuitry requirements for saving costs (Matumoto col.2, ln.39-47).

Note claims 2-17, 18-21 and 22-25 and 30-36 have similar corresponding elements.

Regarding claim 26, Kaiya discloses an endoscope system comprising:

first and second endoscopes having an insertion unit which is insertable into an object, each elongated insertion unit having an illumination optical system for illuminating an object and an objective optical system for forming an optical image of the illuminated object (fig.1, elements 2a and 2b are respective endoscopes);

first and second imaging apparatuses having first and second imaging devices for picking up optical images produced by the first and second endoscopes, respectively, and outputting first and second signals, respectively (fig.1, elements 4a and 4b serve as respective imaging apparatuses);

a video processing unit to which the first and second imaging apparatuses are detachably connected and which processes the first and second signals to produce a video signal (fig.1, elements 32a and 32b);

a display for displaying images of said object according to the video signal (fig.1, elements 5a and 5b);

first and second timing signal generation circuits, respectively incorporated in the first and second imaging apparatuses, for generating timing signals used to drive the imaging devices (fig.4, element 33a is the same synchronization circuit as element 33a in fig.1, where element 78 is the timing signal generation circuit, also note element 34 has a timing signal generation circuit); and

first and second phase adjustment circuits for adjusting the phases of the timing signals so as to compensate for signal delays occurring over first and second signals to the first and second imaging devices which are linked and over which a signal is transmitted (fig.1, elements 33a and 34 are respective phase adjustment circuits; also see col.6, ln.38-52).

Kaiya does not specifically disclose "permitting an operator to manually adjust the phases...." However, Chikama teaches that the phases can be manually adjusted by an operator via a dial or the like (col.7, ln.38-40). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Kaiya and Chikama for clearly viewing crisp, sharp images so as to accurately ascertain the scene or subject being viewed (Chikama col.2, ln.26-30).

Kaiya and Chikama do not specifically disclose the compensation of the signal delay occurring over the signal transmission lines. However, Matumoto teaches the use of a phase-variable sampling pulse generator for adjusting the phases of the timing signals so that signal delays can be compensated over a transmission line (see fig.1 and 3, note the disclosure of element 19, the phase-variable sampling pulse generator, in that the horizontal drive pulse, Φ H, or the reset pulse, Φ R, signals are inputted into element 31 of the phase-variable sampling pulse generator for processing the pulse width, then into element 32 for phase adjustment to be done over a transmission line). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Kaiya, Chikama and Matumoto, as a whole, for compensating the signal delay occurring over the signal transmission lines in order to effectively operate a correlated double sampling circuit or the like without changing the operation timing when it is used for electronic endoscopes having different lengths and to minimize circuitry requirements for saving costs (Matumoto col.2, ln.39-47).

Note claims 27-29 have similar corresponding elements.

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1, 18, 22, 26 and 30 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 5,178,130 in view of Chikama (4,710,807). Although the conflicting claims are not identical, they are not patentably distinct from each other because the claim language in the application 09/523,332 is broader than claim 1 of the U.S. Patent No. 5,178,130.

Further, in the present application, the applicant's independent claims 1, 18, 22 disclose a "timing signal generation circuit... to drive said imaging device", and applicant's independent claim 26 discloses the "first and second timing signal generation circuits... to drive said imaging devices." In claim 1, Kaiya (US 5,178,130) discloses a "first and second driving circuits... by applying respectively first and second driving signals to said first and second solid state imaging devices." Clearly, albeit not exact, both the applicant and Kaiya are disclosing similar limitations because the applicant's timing signal generation circuits and Kaiya's driving circuits serve the same purpose, to drive the imaging devices.

Moreover, the applicant's independent claims 1, 18 and 22 disclose a "phase adjustment circuit for adjusting the phases of the timing signals", and applicant's claim 26 discloses "first and second phase adjustment circuits for adjusting the phases of the timing signals". Kaiya's claim 1 discloses "a synchronization controlling means synchronizing the illumination periods of the respective wavelengths". Evidently, one of

ordinary skilled can clearly acknowledge that the Kaiya's "synchronizing the illumination periods" is basically the same as the applicant's "adjusting the phases of the timing signals" because they both compensate for signal delays.

Kaiya does not specifically disclose the compensation of the signal delay occurring over a signal transmission line. However, Matumoto teaches the use of a phase-variable sampling pulse generator for adjusting the phases of the timing signals so that signal delays can be compensated over a transmission line (see fig.1 and 3, note the disclosure of element 19, the phase-variable sampling pulse generator, in that the horizontal drive pulse, Φ H, or the reset pulse, Φ R, signals are inputted into element 31 of the phase-variable sampling pulse generator for processing the pulse width, then into element 32 for phase adjustment to be done over a transmission line). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Kaiya and Matumoto, as a whole, for effectively operating a correlated double sampling circuit or the like without changing the operation timing when it is used for electronic endoscopes having different lengths and minimizing circuitry requirements for saving costs (Matumoto col.2, ln.39-47).

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen Wong whose telephone number is (571) 272-7341. The examiner can normally be reached on Mondays to Thursdays from 8am-6pm Flextime.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571) 272-7418. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Allen Wong

Primary Examiner
Art Unit 2613

AW
7/28/05